Lab 6 - Code Design

Saturday, April 11, 2020 3:03 PM

- char_count = 0
- line = 1

If(UART has input char)
Increment char_count
If (printable character)
Output char to LCD display
If((line=1) AND ((input=CR) OR (char_count=16))
line=2
else
if ((line=2) and ((input is CR) OR (char_count=16))
Copy line 2 content to line 1 buffer
If (char_count<16) pad buffer with 0's

Move LCD cursor to 1,1		// start of line 1

Write buffer 1 content to LCD

Move LCD cursor to 2,1		// start of line 2
char_count = 0;		

```
while(!limit) {

  // Wait for a character to be received
  // when buffer is empty, return value is 0

  if( DataRdyUART2()== 1)  {

    //  read the character in the buffer

    c = ReadUART2();
    char_count++;
    WriteUART2(c);        // Diagnostic - echo to terminal

    if( (c>=32 ) && ( c<=126) )            // printable character
       putcSPI1( c);
   DelayMs(300);

    if( ((c==13) || (char_count==16)) && (line==1) )  {
       line = 2;                          // move cursor to line 2

       // LCDS cusor command sequence

       SPI1BUF=0x1b;                 // Cursor move - first send escape char
       c_buffer = "[1;0H";                  // command sequence for cursor move
       putsSPI1(5,c_buffer);     // write out string
       DelayMs(500);                 // wait for display to reset
```

```
        char_count = 0;
      }
      else {
        if((line==2) && ((c==13)||(char_count==16))) {
          limit = 1;                    // stop
        }
      }

    }
}
```